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22 June 2000

- ❑ *U.S. Postal Service*
- ❑ *Via Local Courier*
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The Assistant Commissioner of Patents
Washington, D.C. 20231

Attorney Docket No.: P56156

Sir:

Submitted herewith is the following patent application:

Inventor: **ALAN KRASBERG**

Title: **A SYSTEM FOR PROVIDING PROTECTION FROM REACTIVE OXYGEN SPECIES**

Please find attached hereto an application for patent which includes: Specification and Abstract, Claims, and a certified copy of the foreign priority document identified below:

Verified Showing of Small Entity Status: **YES**

Drawings: Formal drawings, 4 sheets, Figures 1 through 4

Claim of priority under 35 U.S.C. §119: **NO**

U.S. Disclosure Document No. 475763 filed on 19 June 2000

Fee (see formula below): **CHECK IS ENCLOSED**

Basic Fee $345/690	$345.00
Additional Fees:	
Total number of claims in excess of 20: 40 times $9/18	$360.00
Number of independent claims in excess of 3: 3 times $39/78	$117.00
Multiple dependent claims $130/260	$0.00
Filing Non-English specification	$0.00
TOTAL FEES FOR THE ABOVE APPLICATION	**$822.00**

Inventor: **ALAN KRASBERG**

Title: A SYSTEM FOR PROVIDING PROTECTION FROM REACTIVE OXYGEN SPECIES

Should the enclosed check become lost or detached from the file, the Commissioner is authorized to charge for any additional charges incurred, or credit any excess payment to the Deposit Account No. 02-4943. Kindly notify the undersigned attorney of any transaction regarding our Deposit Account.

In view of the above, it is requested that this application be accorded a filing date pursuant to 37 CFR 1.53(b).

Please address all corresponding to :

Robert E. Bushnell
1522 K Street, N.W., Suite 300
Washington, D.C. 20005-1202

Respectfully submitted,

Robert E. Bushnell
(Registration No. 27,774)

1522 K Street, N.W.,Suite 300
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Telephone: (202) 408-9040
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Folio: P56156
Date: 8/31/00
I.D.: REB/sys

PTO/SB/17 (2/98)
Approved for use through 9/30/2000. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL

Patent fees are subject to annual revision on October 1.
These are the fees effective October 1, 1997.
Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. *See* Forms PTO/SB/09-12.
See 37 C.F.R. §§1.27 and 1.28.

Complete if Known	
Application Number	*to be assigned*
Filing Date	31 August 2000
First Named Inventor	ALAN KRASBERG
Examiner Name	*to be assigned*
Group/Art Unit	*to be assigned*
Attorney Docket No.	P56156

TOTAL AMOUNT OF PAYMENT	($) 822.00

METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number: 02-4943
Deposit Account Number: _____

☐ Charge Any Additional Fee Required Under 37 C.F.R. §1.16 and 1.17.
☐ Charge the Issue Fee Set in 37 C.F.R. §1.18 at the Mailing of the Notice of Allowance.

2. ■ **Payment Enclosed (CK#37227)**
■ Check ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	690	201	345	Utility filing fee	$ 345.00
106	310	206	155	Design filing fee	$
107	480	207	240	Plant filing fee	$
108	690	208	345	Reissue filing fee	$
114	150	214	75	Provisional filing fee	$

SUBTOTAL (1) **($) 345.00**

2. EXTRA CLAIM FEES

			Extra Claims		Fee from below		Fee Paid
Total claims	60	-20** =	40	x	9	=	360
Independent Claims	6	- 3** =	3	x	39	=	117
Multiple Dependent						=	

** *or number previously paid, if greater; For Reissues, see below*

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	78	202	39	Independent claims in excess of 3
104	260	204	130	Multiple dependent claim, if not paid
109	78	209	39	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) **($) 477.00**

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge-late filing fee or oath	$
127	50	227	25	Surcharge-late provisional filing fee or cover sheet	$
139	130	139	130	Non-English specification	$
147	2,520	147	2,520	For filing a request for reexamination	$
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	$
113	1,840 *	113	1,840*	Requesting publication of SIR after Examiner action	$
115	110	215	55	Extension for reply within first month	$
116	380	216	190	Extension for reply within second month	$
117	870	217	435	Extension for reply within third month	$
118	1,360	218	680	Extension for reply within fourth month	$
128	1,850	228	925	Extension for reply within fifth month	$
119	300	219	150	Notice of Appeal	$
120	300	220	150	Filing a brief in support of an appeal	$
121	260	221	130	Request for oral hearing	$
138	1,510	138	1,510	Petition to institute a public use proceeding	$
140	110	240	55	Petition to revive - unavoidable	$
141	1,210	241	605	Petition to revive - unintentional	$
142	1,210	242	605	Utility issue fee (or reissue)	$
143	430	243	215	Design issue fee	$
144	580	244	290	Plant issue fee	$
122	130	122	130	Petitions to the Commissioner	$
123	50	123	50	Petitions related to provisional applications	$
126	240	126	240	Submission of Information Disclosure Statement	$
581	40	581	40	Recording each patent assignment per property (Times number of properties)	$
146	690	246	345	Filing a submission after final rejection (37 C.F.R. §1.129(a))	$
149	690	249	345	For each additional invention to be examined (37 C.F.R. §1.129(b))	$

Other Fee (specify) _____ $

Other Fee (specify) _____ $

** Reduced by Basic Filing Fee Paid

SUBTOTAL (3) **$ 0.00**

SUBMITTED BY

Typed or Printed Name	Robert E. Bushnell, Esq.			Reg. Number	27,774
Signature	*Robert E. Bushnell*	Date	31 August 2000	Deposit Account User ID	

REB/sys

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ALAN KRASBERG

Serial No.:	*To Be Assigned*	Examiner:	*To Be Assigned*
Filed:	31 August 2000	Art Unit:	*To Be Assigned*

For: A SYSTEM FOR PROVIDING PROTECTION FROM REACTIVE OXYGEN SPECIES

PETITION UNDER 37 C.F.R. §1.102(c)

The Assistant Commissioner
of Patents
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §1.102(c), Applicant respectfully petitions the Commissioner to advance the above-referenced application out of turn for examination, and the reason therefore, states:

Folio: P56156
Date: 8/31/00
I.D.: REB/sys

STATEMENT OF FACTS

The inventor and Applicant is 65 years of age, or more.

REMARKS

The inventor and Applicant is currently 65 years of age, or more. Accordingly, pursuant to 37 C.F.R. §1.102(c), and in accordance with the reasons set forth in the *Manual of Patent Examining Procedure,* §708.02 IV. *APPLICANT'S AGE* an application may be made special upon filing a petition including a showing, as by birth certificate or the Applicant's Affidavit or Declaration, and the Applicant is 65 years of age, or more. No fee is required with such a petition.

Applicant here is 65 years of age, or more, as evidenced by the certified copy of the Certificate of Birth Registration No. 17746 of the Bureau of Vital Statistics of City of Chicago, showing the date of birth of the inventor and Applicant as 29 May 1934.

RELIEF REQUESTED

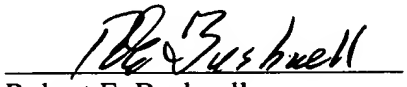
The commissioner is therefore, respectfully requested to:

A. Advance the above-captioned application out of turn for examination;

B. Designate the above-referenced application as "Special";

C. Grant such other and further relief as justice may require.

Respectfully submitted,



Robert E. Bushnell,
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Folio: P56156
Date: 8/31/00
I.D.: REB/sys

PATENT
P56156

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ALAN KRASBERG

Serial No.:	*To Be Assigned*	Examiner:	*To Be Assigned*
Filed:	31 August 2000	Art Unit:	*To Be Assigned*

For: A SYSTEM FOR PROVIDING PROTECTION FROM REACTIVE OXYGEN SPECIES

CROSS-REFERENCE TO DISCLOSURE DOCUMENT

The Assistant Commissioner
of Patents
Washington, D.C. 20231

Sir:

The Commissioner is respectfully requested to place a copy of Disclosure Document No. 475763 filed on 19 June 2000, in the prosecution history of the Applicant's above-referenced U.S. Patent Application.

Respectfully submitted,

Robert E. Bushnell
Reg. No.: 27,774
Attorney for the Applicant

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Folio: P56156
Date: 8/31/00
I.D.: REB/sys

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I CLAIM:

A system for reducing the damage done by free radicals in the body by introducing hydrogen or any of the hydrocarbon fuel gases to the tissues, consisting of;

1), means to introduce one or more of the fuel gases to the respiratory system or directly to the blood,
2), the supply of one or more of the fuel gases to the lungs via a nasal cannula or oral-nasal mask,
3), a substantially-closed container acting as the reservoir for a breathing mixture containing one or more of the fuel gases, to be breathed directly by a man or other animal; this to include containers open at either the top or bottom where the gas is held in place by its relative density,
4), means to add one or more fuel gases, and/or oxygen, to this container;
5), the combination of 3) and 4), plus, this to be accomplished by gravitational stirring, or by diffusion, or by some other manner which will achieve safe and thorough mixing;
6), the combination of 3) and 4), plus, the elimination of ignition sources near the area of addition and wherever levels can be within the explosive range; and
7), the combination of 3) and 4); plus, monitoring and/or controlling fuel gas levels outside of the container so that they do not get within the explosive range,
8), 7), plus eliminating all ignition sources outside the reservoir in areas where leaks from the reservoir could accumulate due to differential density.

The chamber may be open-circuit with no oxygen makeup or carbon dioxide scrubbing system, such as a car or a house or other building with people living and/or working inside; it can be semi-or fully-closed, such as any of the above, or a space suit, or a flexible bag with a scrubbing system with breathing tubes going to a patient, or, in the explosive range, a pressure vessel or animal chamber with a low pressure, slow-flow gas makeup and scrubbing system and no internal sparking or other ignition sources.

Figure I depicts a man in bed in a room. The bed is enclosed in a container open at the bottom for ingress and egress. The breathing gas is a mixture of H_2-O_2, only a fraction the density of air, generated by the continuous electrolysis of water. This mixture is held in the container by gravity in much the same manner that water is held in a bathtub, except that it wants to go up rather than down.
A large overflow pipe, with its entry below the top of the bed, leads to a dump in the attic located above any possible ignition sources, where the low density of the escaping mixture (including exhaled CO_2) will lead it out the roof vent at the top.
In case of failure of the electrolytic generator, a safety bleed tube at the top of the container takes over the life-support function. The bleed flow is set to somewhat less than the H_2-O_2 supply rate and will proceed to vent the mixture in the container and replace it with air, which will then be able to exchange with the air in the bedroom for ventilation.
Any ceiling light fixtures will be explosion-proofed. Heat pump intakes will be relocated so they are not on the ceiling or near the bed, and the fan motor explosion-proofed.

Alan Kronberg
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FIG I